

PROCEEDINGS OF THE TENTH INDIAN COLLOQUIUM ON MICRO-PALAEONTOLOGY AND STRATIGRAPHY. Editors: R. M. Badve, V. K. Borkar, M. A. Ghare and C. Rajshekar, Maharashtra Association for the cultivation of Science, Pune 411 004, India, 1984. (Price Rs. 250-00).

The volume consists of 50 papers and one extended abstract spread over 5 sections covering more than 600 pages with plates, maps, charts and line drawings.

Dr. S. C. D. Sah in his presidential address to the Colloquium evaluates palynostratigraphic studies in the Himalayan sediments and points out that despite good regional and many detailed studies, several problems arising due to structural complexities in the Himalaya remain unsolved. He recommends indepth palynological studies which may constitute one of the most promising as well as rewarding lines of research and a practical means of establishing time correlations.

Section I of the proceedings deals with the Precambrian. Eight papers are published, 5 dealing with Precambrian sediments of Karnataka and one each from Andhra Pradesh, Rajasthan and Himalaya. Extant fungal spores, chained conical spores, sieve plates, modern soil fungi and extant pollen have been described as Precambrian fossils. Caution should have been exercised by the authors. Section II deals with Gondwana sequences and contains four papers. Two papers by Banerjee and co-workers deal with palynological analysis of cores from Lower Permian sequences of Rajmahal and Raniganj Coalfield respectively. Ghosh in his paper concludes that the appearance of estherid fauna during the early Triassic is closely related to the Permo-Triassic boundary. According to him the palaeoecological and palaeoclimatological evidences also corroborates this view. Borker deals with stratigraphy of South Rewa Gondwana Basin. Section III concerns with the Mesozoic sequences and comprises of 6 papers. The papers deal with conodont, fossil algae, microscopic mollusca, planktonic foraminifera and biostratigraphic zonation of Trichinopoly group based on ammonites. Though the problems dealt with are topical, the presentation of these papers is far from satisfactory.

Badve and Nayak record a varied and rich assemblage of fossil algae from Nimar Sandstone. Nine species described by them belong to Cyanophyceae, Corallinaceae and Sasycladaceae. Mehrotra, Das and Sehgal systematically describe a large number of microscopic molluscan shells belonging to gastropods, bivalves and cephalopods from the Early and Middle Triassic of Kumaon Himalaya.

Tertiary studies have been included in Section IV. This is the largest section comprising of 19 papers. 8 of the papers deal with palaeontological aspects, 6 with palynology and 5 with purely lithostratigraphy, sedimentation, statistical analysis of fossils and mineralisation. Significant stratigraphic data have been presented. Mohan, Kumar and Soodan propose ten biozones and six subzones in a sequence ranging in age from Late Paleocene to Middle Miocene in Ratnagiri area situated southeast of Bombay High, based on foraminiferal studies. Salujha and Kindra divide Atharmura anticline into seven zones on the basis of palynofossils. Venkatachala and Sharma propose ten palynozones ranging in age from Upper Cretaceous to Miocene for the subsurface sediments in Narsapur well drilled in the Godavari-Krishna basin. They also recognize seven palaeoecozones on the basis of qualitative and quantitative distribution of palynofacies and organic matter. Their study further attributes that the Paleocene-Eocene sediments represent a fossil-mangrove sequence. Another significant study that needs mention is on late Miocene palaeoceanography

of Andaman sea by Srinivasan and Dave. His conclusions on palaeoclimatology and suggested seasonal upwelling model are significant.

Section V deals with Quaternary sediments and comprises of 14 papers. Honnappa *et al*, have tried to interpret the ecology and provenance of the coastal sediments of Karnataka on the basis of sedimentological evidences and analysis of data on Ostracoda. Phadtare and Kulkarni describe a Miocene Palynoflora from Ratnagiri lignite and compare them with the palynoflora of Southern Indian lignites. The comparison lacks an indepth study. Guha in his paper stresses the importance of Ostracoda in identification of source rock for hydrocarbons. Ghare *et al* deal with the microborings on foraminiferal tests from the Holocene deposits on Raigad District, Maharashtra. Ghosh identifies different carbonate facies of Iran ranging in age from Cenomanian to Miocene on the basis of geochemistry and mineralogical variations.

The reproduction of plates is far from satisfactory and some of them do not convey any message. The tables and charts should have been reduced suitably or redrafted. A large number of papers in the volume are not of adequate standard and there is very little editing done. The binding of the volume is also very poor. In spite of this, the Proceedings Volume presents useful data on micropalaeontology and stratigraphy.

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GEOMORPHOLOGY OF THE RAVI RIVER. By Bhupinder Singh Marh, Inter-India Publications, 1986, 86 Pages, Rs. 95.

This book is the result of a doctoral investigation carried out by the author on the Ravi river. The Introductory Chapter of the book aims at providing a tectonic perspective to the evolution of Himalayan drainage. It is followed by a Chapter which details the geological background of the study area. Data has been collected on various aspects of the Ravi river and includes an analysis of the longitudinal profiles, transverse profiles, and drainage patterns. An interesting point emerging from this analysis of the Ravi river is that the course of the river was modified by a river capture near Rajnagar.

The treatment of the deposits of the Ravi river is rather sketchy. Nevertheless, the record of two palaeosols within the fluvial deposits is significant.

Geomorphology of the Ravi river ends on the note that more research needs to be done to understand the chronology, sedimentation patterns and history of valley fillings of Himalayan rivers. It is indeed quite important that the valley fill sequences of Himalayan drainages are understood and comparison made between the deposits of various rivers.

The maps and photographic plates are poorly reproduced, the two maps given on pages 40-41 would be difficult to read even with a magnifying lens. I hope that in future the publishers would take care to print the panoramic views in large fold-outs. Otherwise, the purpose of a panoramic view stands defeated.

I would certainly recommend this book to post-graduate students and researchers looking for Indian case histories for the development of drainages in tectonic mountain systems.

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